FLA 00777

PIONEER SAND COMPANY

Warrington, Florida

Pioneer Sand Company, located on Saufly Field Road, 5 miles west of Pensacola, Florida, is actively engaged in the mining of sand for commercial use. The company owns an inactive quarry of approximately 20 acres into which shredded auto parts, construction debris, and various industrial sludges and resins have been deposited. Two surface impoundments are also located on the site.

The Florida Department of Environmental Regulation (DER) and the U.S. Environmental Protection Agency detected the elevated levels of chromium, lead, and nickel in the on-site soils. A monitoring well installed by Pioneer Sand and one of the surface impoundments were found to contain elevated levels of chromium and lead. A well field for the City of Pensacola, which has a population of 67,000, is located within 3 miles of this site.

This site was on the Interim Priority List of 160 sites.

EARLY HAZARD RANKING SYSTEM SITE

NO REFERENCES AVAILABLE

FLD056116965

Facility Name: Pioneer Sand Company

Location: Warrington, FL

EPA Region: IV

Person(s) in Charge of the Facility: Walter Dugger

Name of Reviewer: Gene Oliver Date: 8-5-82

General Description of the Facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

Pioneer Sand Company is an industrial waste disposal site containing construction debris, auto shred material, and sludges from the local naval air station and a nearby chemical firm. Leachate is entering surface water adjacent to the site.

Scores: $S_M$ = 51.97 ($S_{gw}$ = 88.45 $S_{sw}$ = 16.08 $S_a$ = 0)

$S_{FE}$ = NA

$S_{DC}$ = NA

HRS COVER SHEET

## GROUND WATER ROUTE WORK SHEET

| | Rating Factor | Assigned Value (Circle One) | Multi-plier | Score | Max. Score | Ref. (Section) |
|---|---|---|---|---|---|---|
| 1 | Observed Release | 0 (45) | 1 | 45 | 45 | 3.1 |
| | If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2. | | | | | |
| 2 | Route Characteristics | | | | | 3.2 |
| | Depth to Aquifer of Concern | 0 1 2 3 | 2 | | 6 | |
| | Net Precipitation | 0 1 2 3 | 1 | | 3 | |
| | Permeability of the Unsaturated Zone | 0 1 2 3 | 1 | | 3 | |
| | Physical State | 0 1 2 3 | 1 | | 3 | |
| | Total Route Characteristics Score | | | | 15 | |
| 3 | Containment | 0 1 2 3 | 1 | | 3 | 3.3 |
| 4 | Waste Characteristics | | | | | 3.4 |
| | Toxicity/Persistence | 0 3 6 9 12 (15) 18 | 1 | 15 | 18 | |
| | Hazardous Waste Quantity | 0 1 2 3 4 5 6 7 (8) | 1 | 8 | 8 | |
| | Total Waste Characteristics Score | | | 23 | 26 | |
| 5 | Targets | | | | | 3.5 |
| | Ground Water Use | 0 1 2 (3) | 3 | 9 | 9 | |
| | Distance to Nearest Well/Population Served | 0 4 6 8 10 12 16 18 20 24 30 32 35 (40) | 1 | 40 | 40 | |
| | Total Targets Score | | | 49 | 49 | |
| 6 | If line 1 is 45, multiply 1 x 4 x 5<br>If line 1 is 0, multiply 2 x 3 x 4 x 5 | | | 50715 | 57,330 | |
| 7 | Divide line 6 by 57,330 and multiply by 100 | $S_{gw}$ = 88.46 | | | | |

## SURFACE WATER ROUTE WORK SHEET

| | Rating Factor | Assigned Value (Circle One) | Multiplier | Score | Max. Score | Ref. (Section) |
|---|---|---|---|---|---|---|
| 1 | Observed Release | 0 (45) | 1 | 45 | 45 | 4.1 |
| | If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2. | | | | | |
| 2 | Route Characteristics | | | | | 4.2 |
| | Facility Slope and Intervening Terrain | 0 1 2 3 | 1 | | 3 | |
| | 1-yr. 24-hr. Rainfall | 0 1 2 3 | 1 | | 3 | |
| | Distance to Nearest Surface Water | 0 1 2 3 | 2 | | 6 | |
| | Physical State | 0 1 2 3 | 1 | | 3 | |
| | Total Route Characteristics Score | | | | 15 | |
| 3 | Containment | 0 1 2 3 | 1 | | 3 | 4.3 |
| 4 | Waste Characteristics | | | | | 4.4 |
| | Toxicity/Persistence | 0 3 6 9 12 (15) 18 | 1 | 15 | 18 | |
| | Hazardous Waste Quantity | 0 1 2 3 4 5 6 7 (8) | 1 | 8 | 8 | |
| | Total Waste Characteristics Score | | | 23 | 26 | |
| 5 | Targets | | | | | 4.5 |
| | Surface Water Use | 0 1 (2) 3 | 3 | 6 | 9 | |
| | Distance to a Sensitive Environment | 0 1 (2) 3 | 2 | 4 | 6 | |
| | Population Served/Distance to Water Intake Downstream | (0) 4 6 8 10 12 16 18 20 24 30 32 35 40 | 1 | 0 | 40 | |
| | Total Targets Score | | | 10 | 55 | |
| 6 | If line 1 is 45, multiply 1 x 4 x 5<br>If line 1 is 0, multiply 2 x 3 x 4 x 5 | | | 10350 | 64,350 | |
| 7 | Divide line 6 by 64.350 and multiply by 100 | $S_{SW}$ = | | 16.08 | | |

## AIR ROUTE WORK SHEET

| | Rating Factor | Assigned Value (Circle One) | Multiplier | Score | Max. Score | Ref. (Section) |
|---|---|---|---|---|---|---|
| 1 | Observed Release | (0) 45 | 1 | 0 | 45 | 5.1 |
| | Date and Location: | | | | | |
| | Sampling Protocol: | | | | | |
| | If line 1 is 0, the S = 0. Enter on line 5.<br>If line 1 is 45, then proceed to line 2. | | | | | |
| 2 | Waste Characteristics | | | | | 5.2 |
| | Reactivity and Incompatibility | 0 1 2 3 | 1 | | 3 | |
| | Toxicity | 0 1 2 3 | 3 | | 9 | |
| | Hazardous Waste Quantity | 0 1 2 3 4 5 6 7 8 | 1 | | 8 | |
| | Total Waste Characteristics Score | | | | 20 | |
| 3 | Targets | | | | | 5.3 |
| | Population Within 4-Mile Radius | 0 9 12 15 18 21 24 27 30 | 1 | | 30 | |
| | Distance to Sensitive Environment | 0 1 2 3 | 2 | | 6 | |
| | Land Use | 0 1 2 3 | 1 | | 3 | |
| | Total Targets Score | | | | 39 | |
| 4 | Multiply 1 x 2 x 3 | | | | 35,100 | |
| 5 | Divide line 4 by 35,100 and multiply by 100 $S_a$ = 0 | | | | | |

| | $S$ | $S^2$ |
|---|---|---|
| Groundwater Route Score ($S_{gw}$) | 88.46 | 7825.17 |
| Surface Water Route Score ($S_{sw}$) | 16.08 | 258.57 |
| Air Route Score ($S_a$) | 0 | 0 |
| $S_{gw}^2 + S_{sw}^2 + S_a^2$ | | 8083.74 |
| $\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$ | | 89.91 |
| $\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73$ | | $S_M$ = 51.97 |

**WORKSHEET FOR COMPUTING $S_M$**

## FIRE AND EXPLOSION WORK SHEET

| | Rating Factor | Assigned Value (Circle One) | Multiplier | Score | Max. Score | Ref. (Section) |
|---|---|---|---|---|---|---|
| 1 | Containment | 1 3 | 1 | | 3 | 7.1 |
| 2 | Waste Characteristics | | | | | 7.2 |
| | Direct Evidence | 0 3 | 1 | | 3 | |
| | Ignitability | 0 1 2 3 | 1 | | 3 | |
| | Reactivity | 0 1 2 3 | 1 | | 3 | |
| | Incompatibility | 0 1 2 3 | 1 | | 3 | |
| | Hazardous Waste Quantity | 0 1 2 3 4 5 6 7 8 | 1 | | 8 | |
| | Total Waste Characteristics Score | | | | 20 | |
| 3 | Targets | | | | | 7.3 |
| | Distance to Nearest Population | 0 1 2 3 4 5 | 1 | | 5 | |
| | Distance to Nearest Building | 0 1 2 3 | 1 | | 3 | |
| | Distance to Sensitive Environment | 0 1 2 3 | 1 | | 3 | |
| | Land Use | 0 1 2 3 | 1 | | 3 | |
| | Population Within 2-Mile Radius | 0 1 2 3 4 5 | 1 | | 5 | |
| | Buildings Within 2-Mile Radius | 0 1 2 3 4 5 | 1 | | 5 | |
| | Total Targets Score | | | | 24 | |
| 4 | Multiply 1 x 2 x 3 | | | | 1,440 | |
| 5 | Divide line 4 by 1,440 and multiply by 100 | $S_{FE}$ = | | | | |

## DIRECT CONTACT WORK SHEET

| | Rating Factor | Assigned Value (Circle One) | Multi-plier | Score | Max. Score | Ref. (Section) |
|---|---|---|---|---|---|---|
| 1 | Observed Incident | 0 45 | 1 | | 45 | 8.1 |
| | If line 1 is 45, proceed to line 4<br>If line 1 is 0, proceed to line 2 | | | | | |
| 2 | Accessibility | 0 1 2 3 | 1 | | 3 | 8.2 |
| 3 | Containment | 0 15 | 1 | | 15 | 8.3 |
| 4 | Waste Characteristics<br>Toxicity | 0 1 2 3 | 5 | | 15 | 8.4 |
| 5 | Targets | | | | | 8.5 |
| | Population Within a 1-Mile Radius | 0 1 2 3 4 5 | 4 | | 20 | |
| | Distance to a Critical Habitat | 0 1 2 3 | 4 | | 12 | |
| | Total Targets Score | | | | 32 | |
| 6 | If line 1 is 45, multiply 1 x 4 x 5<br>If line 1 is 0, multiply 2 x 3 x 4 x 5 | | | | 21,600 | |
| 7 | Divide line 6 by 21,600 and multiply by 100 $S_{DC}$ = | | | | | |

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: The purpose of these records is to provide a convenient way to prepare an auditable record of the data and documentation used to apply the Hazard Ranking System to a given facility. As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference that will make the document used for a given data point easier to find. Include the location of the document and consider appending a copy of the relevant page(s) for ease in review.

FACILITY NAME: Pioneer Sand Company

LOCATION: Warrington, FL

## GROUND WATER ROUTE

### 1 OBSERVED RELEASE

Contaminants detected (5 maximum):

Chromium is onsite well - data furnished by Sparks of FL-DER.

Rationale for attributing the contaminants to the facility:

Ties in with industrial sludge disposal at site.

* * *

### 2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifer(s) of concern:

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

Depth from the ground surface to the lowest point of waste disposal/ storage:

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

Mean annual lake or seasonal evaporation (list months for seasonal):

Net precipitation (subtract the above figures):

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Permeability associated with soil type:

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Method with highest score:

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Chromium; trivalent Cr is moderately toxic orally (common form).

Compound with highest score:

Chromium

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

unline borrow pit: 200 feet x 150 feet by nominal 6 feet = 180,000 $ft^3$
= 6,666 $yd^3$

Basis of estimating and/or computing waste quantity:

EPA file description

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

DW wells documented by FIT investigators during sampling study.

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

2000 feet - FIT investigator.

Distance to above well or building:

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

Three high capacity municipal wells (City of Pensacola) drawing from Sand and Gravel aquifer - one of the best water supplies in state.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

Total population served by ground water within a 3-mile radius:

Assume 10,000 due to well fields.

## SURFACE WATER ROUTE

### 1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

Chromium detected in catch basin and adjacent fish pond.

Rationale for attributing the contaminants to the facility:

Elevated chromium also found in onsite monitoring well - Spanks, FLDER.

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### 2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Name/description of nearest downslope surface water:

Average slope of terrain between facility and above-cited surface water body in percent:

Is the facility located either totally or partially in surface water?

Is the facility completely surrounded by areas of higher elevation?

1-Year 24-Hour Rainfall in Inches

Distance to Nearest Downslope Surface Water

Physical State of Waste

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Method with highest score:

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated
(See GW)

Compound with highest score:

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

(See GW)

Basis of estimating and/or computing waste quantity:

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Fish pond adjacent to site.

Is there tidal influence?

No

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

.5 - 1 miles SW of site: map furnished by City of Pensacola Water Division.

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

None

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

Total population served:

Name/description of nearest of above water bodies:

Distance to above-cited intakes, measured in stream miles.

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

Date and location of detection of contaminants

Methods used to detect the contaminats:

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Most incompatible pair of compounds:

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi  0 to 1 mi  0 to 1/2 mi  0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

RCRA/NPL POLICY QUESTIONNAIRE FOR INITIAL SCREENING

Site Name Pioneer Sand

City Warrington State FL

Facility I.D. Number FLD056116965

684

Type of Facility: Generator____ Transporter____ TSD____

| I. RCRA APPLICABILITY | yes | no |
|---|---|---|
| Does the facility have RCRA interim status? | ___ | X |
| Did the facility ever have RCRA interim status? | ___ | X |
| Does the facility have a final or post-closure permit? If so, date issued _____ | ___ | X |
| Is the facility a non-notifier that has been identified by States or EPA? | ___ | X |
| Is the facility a known or possible protective filer? | ___ | X |

STOP HERE IF ALL ANSWERS TO QUESTIONS IN SECTION I ARE NO

| II. FINANCIAL STATUS | | |
|---|---|---|
| Is the facility owned by an entity that has filed for bankruptcy under federal laws (Chapter 7 or 11) or State laws? | ___ | ___ |

If yes, what has it filed under?
Chapter 7___ Chapter 11___ Other___

III. ENFORCEMENT

RCRA Status

| | | |
|---|---|---|
| Has the facility lost authorization to operate via LOIS, 3005(c) permit denial, 3008(h) IS termination, 3005(d) permit revocation? | ___ | ___ |
| Has the facility's Interim Status been terminated via another mechanism (i.e. administrative termination)? | | |

CERCLA Status

What CERCLA financed remedial or removal activities have been initiated at the site? (RI/FS, RD/RA, O&M, forward planning, and removal; does not include enforcement or PA/SI activities)

Enforcement Status

| | YES | NO |
|---|---|---|
| In general, would you characterize the facility as demonstrating an unwillingness to undertake corrective action based on prior State, CERCLA or RCRA actions? | _____ | _____ |

If yes, please describe and cite the authorities exercised.

| | | |
|---|---|---|
| Is the owner/operator a party to any enforcement action at the site? | _____ | _____ |

If not, why not?

Are any PRPs (including owner/operators) undertaking remedial studies or action in response to CERCLA enforcement authorities? What is the extent/type of work that has been completed (RI/FS, etc.) and who (generators, owner/operator, etc.) is conducting the work?